Massachusetts STD, HIV/AIDS and Viral Hepatitis Surveillance Report: 2008

Massachusetts
Department of Public Health
Bureau of Infectious Disease Prevention, Response and Services
Division of STD Prevention and HIV/AIDS Surveillance
Division of Epidemiology and Immunization

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Executive Summary 2008

The Massachusetts STD, HIV/AIDS, and Viral Hepatitis Surveillance Report, an annual product of the MDPH Bureau of Infectious Disease Prevention, Response and Services, is an occasion to reflect upon trends in these diseases within the Commonwealth of Massachusetts. In 2008:

- Infectious syphilis (primary, secondary, and early latent syphilis) incidence rates continued at higher than previous levels – a trend which began in the last quarter of 2007 and continued through 2008.
- Gonorrhea incidence remained stable or decreased slightly. Gonococcal disease is concentrated within two major urban centers: Boston and Springfield.
- Incident chlamydia infection continued to increase -- the more we screen for it, the more infections we find. The question remains as to whether these cases are reflective of increased electronic laboratory reporting, as well as more access to screening with more sensitive assays for infection, which may still result in complications such as epididymitis, pelvic inflammatory disease, ectopic pregnancy, infertility, or chronic pelvic pain.

As to HIV/AIDS, notable trends in 2007 included the following:

- Newly diagnosed infections and deaths continued to decline, and only one new case of perinatal HIV infection was reported, but the actual number of persons known to be living with HIV/AIDS in Massachusetts continued to increase to over 17,000 in 2007 because survival continues to improve.
- Similar to other sexually transmitted infections, blacks and Hispanics have higher rates of HIV infection.
- Male with male sex remains the single largest risk factor among newly diagnosed HIV cases.

With regard to viral hepatitis:

- Chronic confirmed cases of hepatitis B continued to decline, a trend likely related to school required hepatitis B vaccination programs, many of which were phased in between 2002-05.
- Improvements in surveillance led to identification of more newly diagnosed, confirmed hepatitis C cases. At approximately 75 cases per 100,000 population, hepatitis C remains one of the highest volume reportable infection.

Highlighted on pages 2-21 are the trends within special populations disproportionally affected by STDs, HIV/AIDS, and viral hepatitis. Health disparities exist across the nation, Massachusetts is no exception, and STDs, HIV/AIDS, and viral hepatitis disproportionally affect women, minorities (both sexual and racial/ethnic minorities), and youth and young adults. Massachusetts data are reflective of a number of national trends. Where we differ is in the fact that our surveillance has revealed increasing gaps among certain racial/ethnic and sexual minorities in reported STDs. It remains to be determined whether this reflects improved access to care leading to more

screening and identification of infection or true increases in infection within certain minority populations. Improvements in reporting systems are critical for improving our understanding of disparities in reportable diseases.

It is critical to recognize that every case report represents a sentinel event, not only for that person, but also for the community. We know much about how to prevent transmission of disease. Our toolbox of prevention has strategies that incorporate latex barriers, and contextualize their use. Secondary preventive measures, such as screening for infection stops chains of transmission. Primary prevention is possible with STD vaccines, such as hepatitis B vaccine and HPV vaccine. Sexual network research delineates why certain communities are disproportionately affected by these infections. An STD reflects individual risk and also the fact that that individual is a member of a community with a greater burden of infection.

Sexually transmitted infections, including HIV/AIDS and viral hepatitis, derive from a nexus of individual human behavior, clinical diagnosis and treatment, and public health prevention and control. The intended audience for this annual surveillance report includes clinicians and the laboratory professionals who report these cases, as well as community organizations, local public health departments, policymakers, researchers, and anyone interested in the sexual health and well-being of residents of the Commonwealth of Massachusetts. Feedback is welcome.

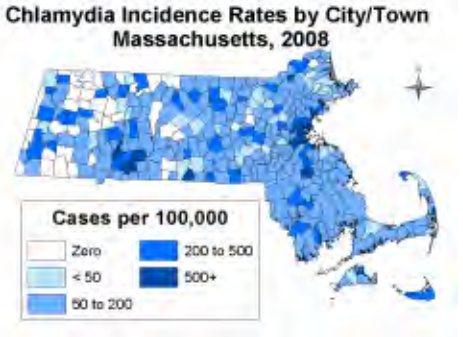
Unless otherwise noted, all incidence calculations represent crude rates. The source for all denominator data is the U.S. Census, 2000. All data reported are current as of October 2009. All information on STD cases reflect year of report. Due to prolonged reporting delays related to transitioning from code-based to name-based reporting of HIV cases, all HIV/AIDS data reflect HIV diagnosed through 2007.

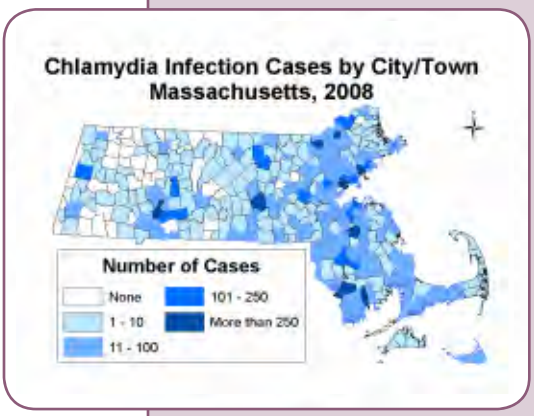
CHLAMYDIA

There were 17,434 reported chlamydia infections in Massachusetts in 2008. Chlamydia infection is widely distributed in Massachusetts.

Compared to 2007, the distribution of cases throughout the state was markedly similar in 2008.

Chlamydia case and incidence data by city and town are available online at www.mass.gov/dph/cdc/std



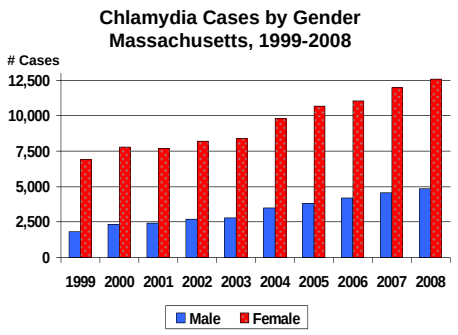


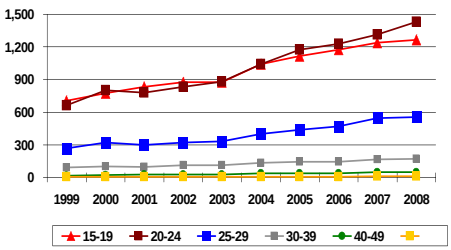
- The highest incidence rates of the diagnosis of chlamydia infection are clustered in the large urban areas around Boston and Springfield.
- Rates in the majority of cities and towns in the eastern part of the the state fall into the 11-100 range. In the western part of the state the majority is the 1-10 range.

Reported cases of chlamydia infection in Massachusetts has doubled in the past ten years from 8,725 in 1999 to 17,434 in 2008.

There was a 5% increase in the number of cases in 2008 compared to 2007.

Of the total reported cases in 2008, 4,841 were among men and 12,576 were among women. The greater number of chlamydia cases among women is partly attributable to a higher level of screening in women as compared to men.

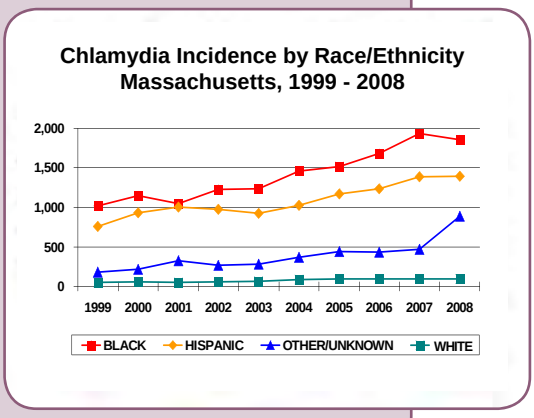




In 2008, the incidence of chlamydia infection in Massachusetts among adolescents (ages 15-19) and young adults (ages 20-24) exceeded 1,250 per 100,000. This contrasts with the overall Massachusetts chlamydia infection rate of 274.1 per 100,000.

Historically, communities of color have been disproportionately affected by STDs. In 2008, compared to whites, the incidence of reported chlamydia infections in Massachusetts was 19 times higher in blacks and 14 times higher in Hispanics. Disparities in the rate of chlamydia infection in Massachusetts have grown in recent years.

In 2008, changes in electronic reporting of STD cases to MDPH resulted in an increased proportion of STD cases being categorized as Other race. Increases in the rate of STD infections in the Other category, with concomitant decreases in black and Hispanic rates, may be related to shifts in electronic reporting rather than true shifts in incidence rates.



INFERTILITY PREVENTION PROJECT

Since 1997, the Division of STD Prevention has participated in a Centers for Disease Control and Prevention (CDC)-funded Infertility Prevention Project. The goal of this project is to reduce infertility and other health consequences of chlamydia infection through increased screening and treatment of women who are at higher risk for infection.

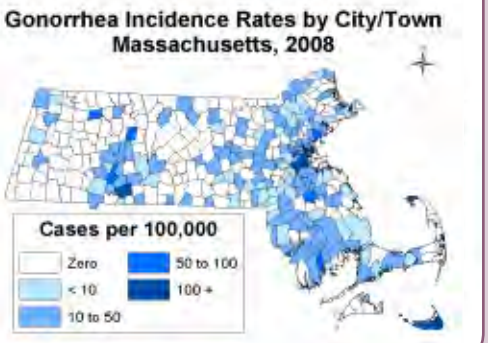
In 2008, as part of the Infertility Prevention Project, 17,372 specimens were tested for chlamydia infection. Test results from participating sites have yielded the following:

PERCENT POSITIVE FOR CHLAMYDIA TRACHOMATIS			
SITE TYPE		FEMALES	MALES
School-Based Health Centers	(n = 775)	7%	6%
County Jails	(n = 3,447)	5%	6%
Family Planning Clinics	(n = 6,803)	5%	11%
STD Clinics	(n = 6,347)	7%	8%

GONORRHEA

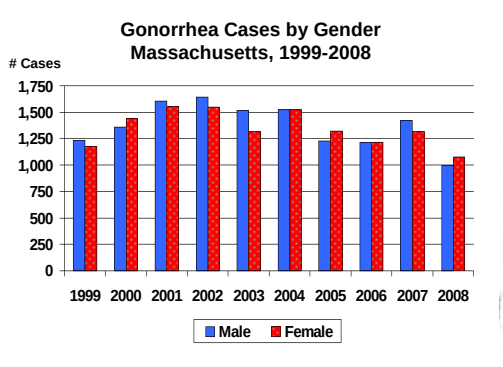
There were 2,075 cases of gonorrhea reported in Massachusetts in 2008. Although gonorrhea is widely distributed in Massachusetts, cases are concentrated in urban locations.

Gonorrhea case and incidence data by city and town are available online at www.mass.gov/dph/cdc/std

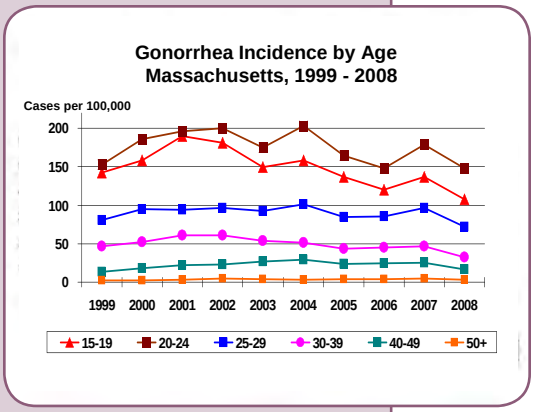


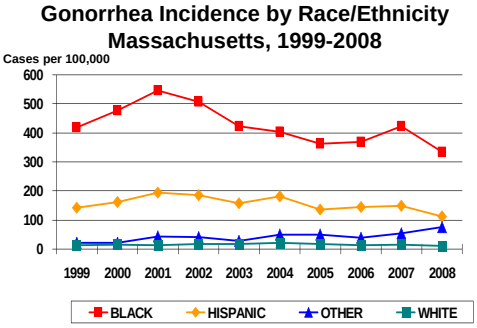
- The highest incidence rates of the diagnosis of gonorrhea infection are clustered in the large urban areas around Boston and Springfield.
- The highest concentration of cases is in the eastern part of the state.

Massachusetts experienced an increase in reported gonorrhea cases from 1998– 2002, followed by a decline from 2003– 2006. After a 10% increase from 2006 to 2007, there was a 24% decrease in gonorrhea cases from 2007 to 2008. Of the 2,075 total cases in 2008, 1,079 were in women and 992 were in men. There were four cases reported with unknown gender.



The incidence of gonorrhea in Massachusetts is highest among young adults (ages 20-24), followed by adolescents (ages 15-19). Compared to the state-wide incidence (32.6 per 100,000) of gonorrhea, the incidence was 3.3 times higher for adolescents and 4.5 times higher for young adults.





In 2008, compared to whites, the reported gonorrhea incidence in Massachusetts was 33.4 times higher in blacks and 11.3 times higher in Hispanics.

Racial and ethnic disparities in gonorrhea rates in Massachusetts exceed the national rate, where the incidence in gonorrhea is 20 times higher in blacks, and two times higher in Hispanics, when compared to whites. (Source: CDC. *Sexually Transmitted Disease Surveillance, 2008.* Atlanta, GA: U.S. Department of Health and Human Services, November 2009.)

In 2008, changes in electronic reporting of STD cases to MDPH resulted in an increased proportion of STD cases being categorized as Other race. Increases in the rate of STD infections in the Other category, with concomitant decreases in Black and Hispanic rates, may be related to shifts in electronic reporting rather than true shifts in incidence rates.

TRENDS IN ANTIBIOTIC RESISTANT GONORRHEA

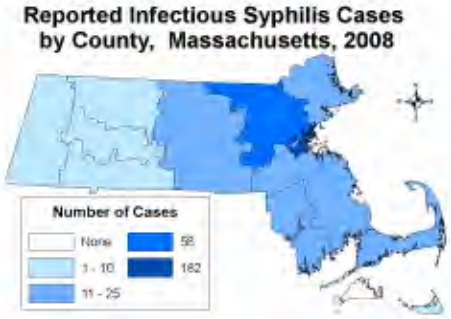
Quinolone-resistant *Neisseria gonorrhoeae* (QRNG) is a strain of the bacteria and may not be cured by standard oral antibiotic therapies. QRNG often requires more aggressive approaches to diagnosis and treatment.

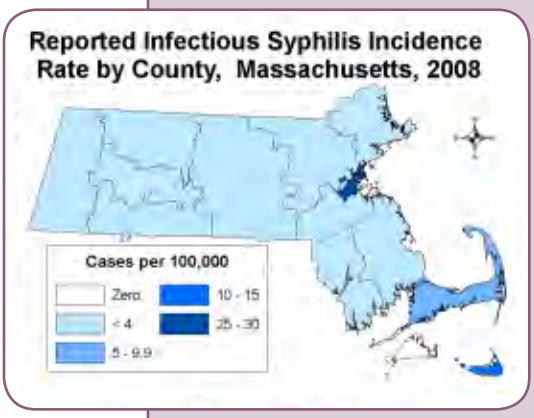
Results from the QRNG Prevalence Monitoring Project at the MDPH William A. Hinton State Laboratory Institute indicate that the prevalence of QRNG continues to rise in Massachusetts. The proportion of QRNG among positive gonorrhea cultures increased from 13.5% in 2003 to 24.6% in 2007. Ninety-six percent of QRNG cases were identified among men, and 78% of the men who tested positive for QRNG self-identified as men who have sex with men (MSM).

SYPHILIS

In 2008, there were 367 reported infectious primary, secondary, and early latent syphilis cases in Massachusetts, a 38% increase since 2007. Although infectious syphilis cases have been reported in almost all counties, 50% of cases (182) were reported in Suffolk County.

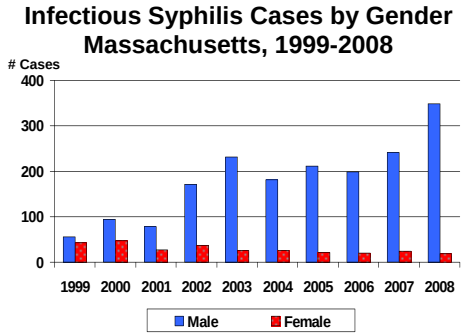
Infectious syphilis case and incidence data by city and town are available online at www.mass.gov/dph/cdc/std



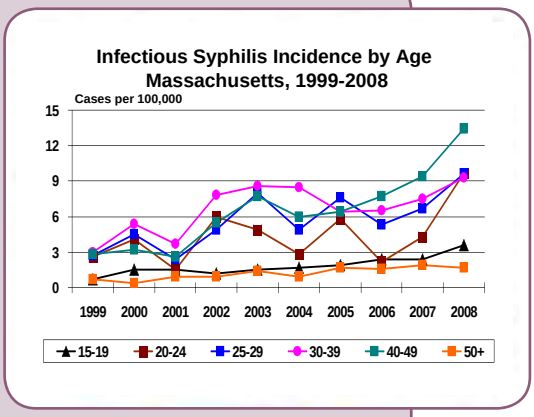


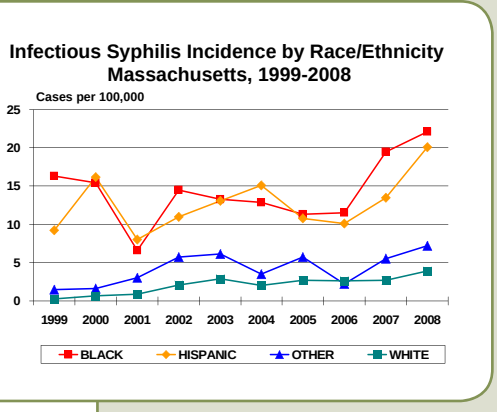
- All but four of the of the counties have a syphilis incidence rate of less than four cases per 100,000 population. Dukes County has a rate of zero.
- Suffolk county has the highest syphilis rate at 27.2 cases per 100,000 population.

In Massachusetts, the male-to-female ratio of infectious syphilis cases changed from 1.3 to 1 in 1999, to 19.4 to 1 in 2008. This shift reflects an increase in the number of infectious syphilis cases diagnosed in men who have sex with men. This trend has also been observed in other regions of the United States.



In contrast to chlamydia infection and gonorrhea, which tend to occur more frequently among adolescents and young adults, infectious syphilis is more commonly reported in people over age twenty-five years.





In 2008, compared to whites, the reported infectious syphilis incidence in Massachusetts was 5.7 times higher in blacks and 5.2 times higher in Hispanics.

In 2008, changes in electronic reporting of STD cases to MDPH resulted in an increased proportion of STD cases being categorized as Other race.

SYPHILIS IN MEN WHO HAVE SEX WITH MEN (MSM)

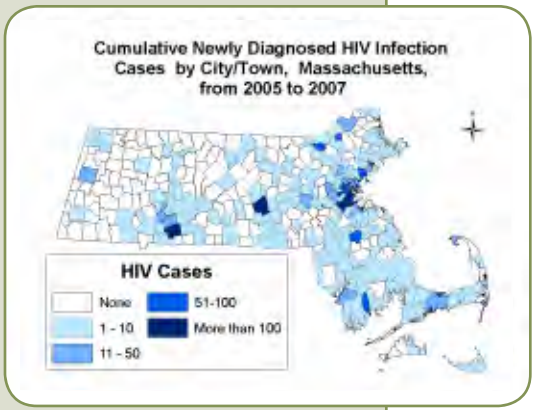
In Massachusetts, MSM represent a higher-risk group for infectious syphilis. Of the 367 reported infectious syphilis cases in 2008, 302 (86.5%) were in MSM. Forty-one percent (124/302) of the MSM with infectious syphilis disclosed that they were co-infected with HIV. Fifty-two percent (157/302) of the infectious syphilis cases in MSM were reported in Suffolk county.

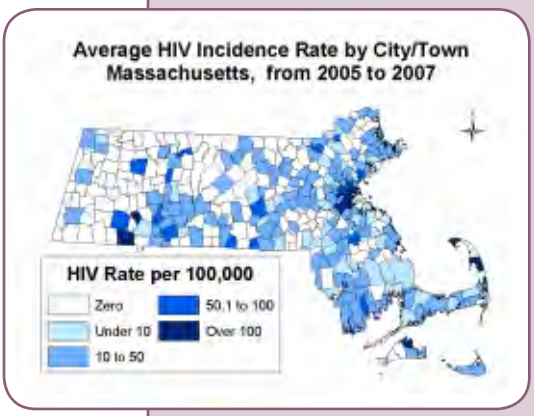
Transmission of syphilis can occur between men through unprotected oral and anal sex. Additional information and resources regarding MSM and STDs is available online at **www.gettestedmass.org.**

HIV/AIDS

Of the 351 cities and towns in Massachusetts, 173 (49.3%) had at least one, newly diagnosed HIV infection reported from 2005-2007. The majority of newly identified HIV infections were reported in large urban areas.

HIV infection case and incidence data by city and town are available online at www.mass.gov/dph/cdc/aids. Additional information is available through the MDPH HIV/AIDS Epidemiologic Profile at the same weblink.

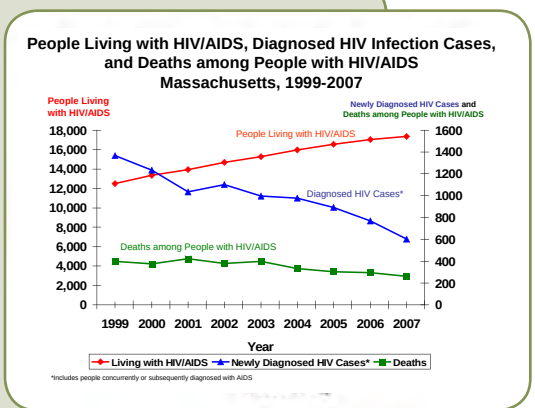




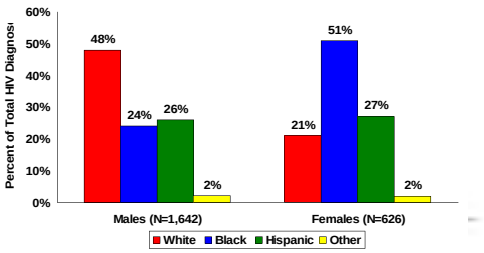
- Of those cities and towns where HIV infections were diagnosed between 2005-2007, the majority rates of diagnosis of HIV infection is between 10-50 per 100,000 population.
- There were six cities and towns with diagnosis of HIV infection rates of greater than 100 per 100,000 population, including Boston.

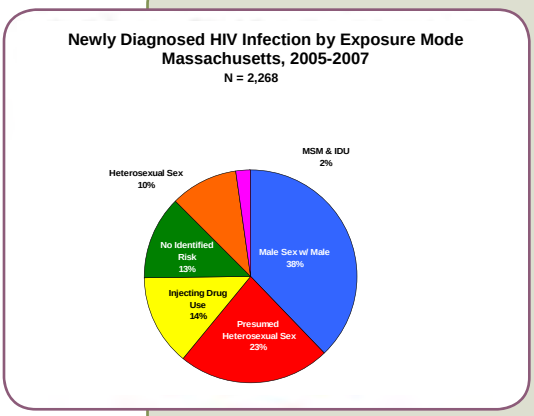
In 2007, there were 603 reported, newly diagnosed HIV infections and 261 deaths among people with HIV/AIDS in Massachusetts.

Newly diagnosed HIV infections and deaths among people with HIV/AIDS continue to decline each year, but because newly diagnosed infections continue to exceed the number of deaths annually, the number of people known to be living with HIV/AIDS in Massachusetts increased from 12,493 in 1999 to 17,356 in 2007.



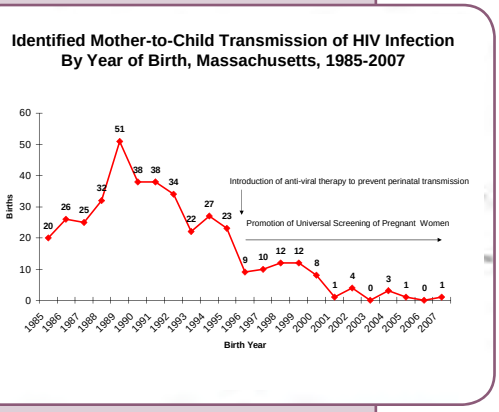
From 2005-2007, of the 2,268 newly diagnosed HIV infections in Massachusetts, 1,642 (72%) were in men and 626 (28%) were in women. Most of the newly diagnosed HIV infections in men were in white men whereas the majority of newly diagnosed HIV infections in women were in black women.





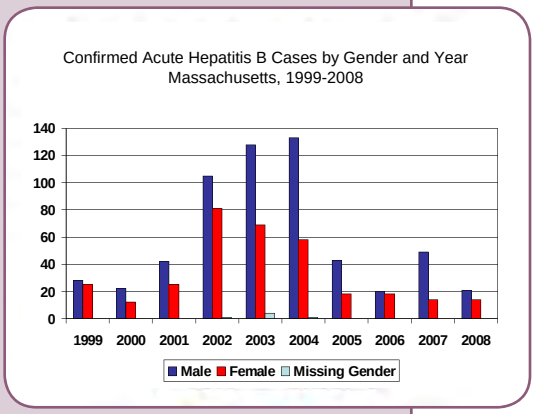
From 2005-2007, the primary exposure modes reported among newly diagnosed cases of HIV infection in Massachusetts were male with male sex (38%), presumed heterosexual sex (23%), injection drug use (14%) and heterosexual sex (10%).

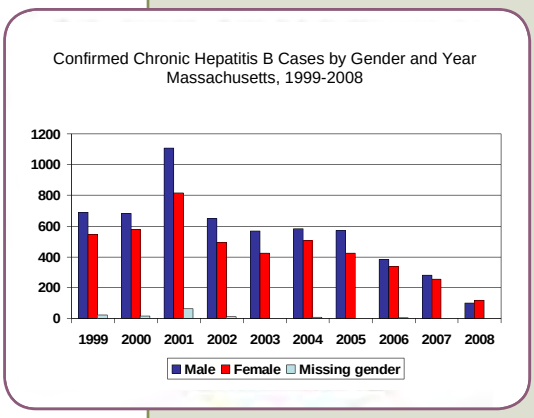
Since the mid-1990's, Massachusetts has experienced a dramatic reduction in mother-to-child transmission of HIV infection, with no HIV-infected newborns identified in 2006 and only one in 2007. This success is attributed to improvements in HIV screening during pregnancy and the treatment of HIV-infected women with antiretroviral therapy.



VIRAL HEPATITIS

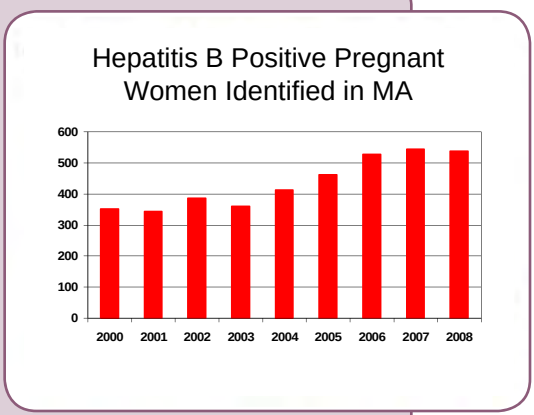
The number of confirmed cases of chronic hepatitis B reported to Massachusetts has been steadily declining since 2005. In 2008, 220 cases were reported. This is a 78% decline since 2005. This trend is related to increasing levels of immunity against hepatitis B in groups at risk of infection and virtual universal immunization of children against hepatitis B



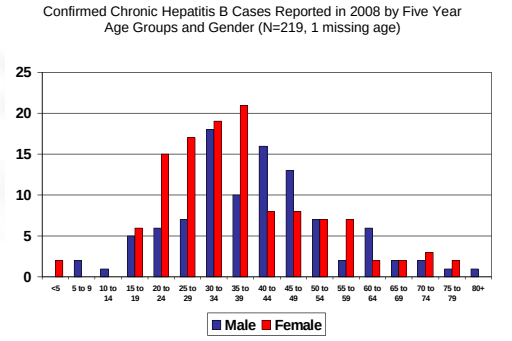


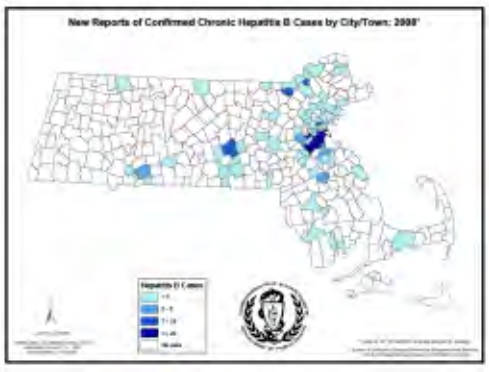
Thirty five confirmed acute cases of hepatitis B were identified in 2008. Confirmation of acute infection requires additional information, including specific laboratory test result and symptom information.

In 2008, 537 hepatitis B positive pregnant women were identified in Massachusetts. As a result of enhanced surveillance more women are identified prior to birth allowing case management to begin early and prevent transmission of the virus to infants. Among infants born to hepatitis B positive women, 98% were vaccinated with hepatitis B vaccine and HBIG within 12 hours of birth.



Due to enhanced surveillance focused on identifying pregnant women who are hepatitis B carriers, a large number of the hepatitis B cases identified and reported in 2008 were in women between the ages of 20 and 39 years. While efforts are made in identifying infection among the household and sexual contacts of these women, there are many barriers to getting those partners tested for evidence of infection.

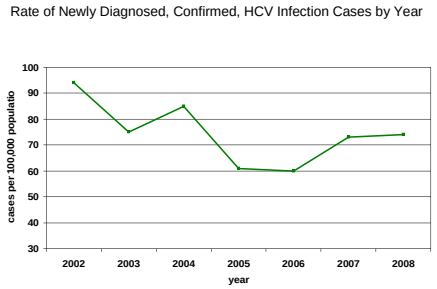


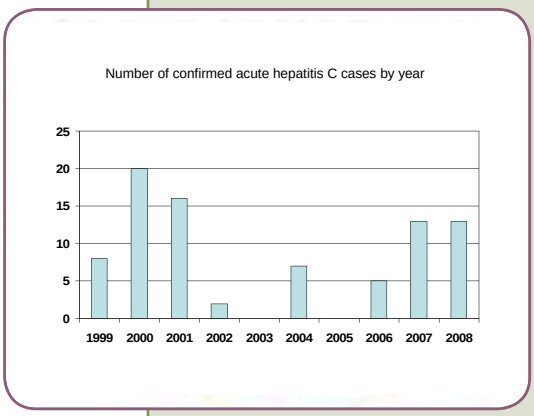


Most newly diagnosed cases of chronic hepatitis B are in people living in urban, areas such as Boston, Worcester, and Springfield.

VIRAL HEPATITIS

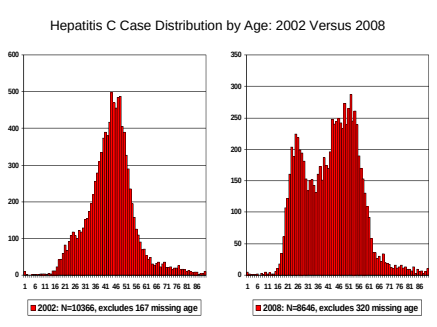
Previous analyses had suggested a steady decline in the number of newly diagnosed hepatitis C cases reported in Massachusetts since 2004. Improvements in surveillance, however, has been associated with an increase in cases reported from 2006 through 2008. Hepatitis C remains one of the highest volume diseases reported in Massachusetts.



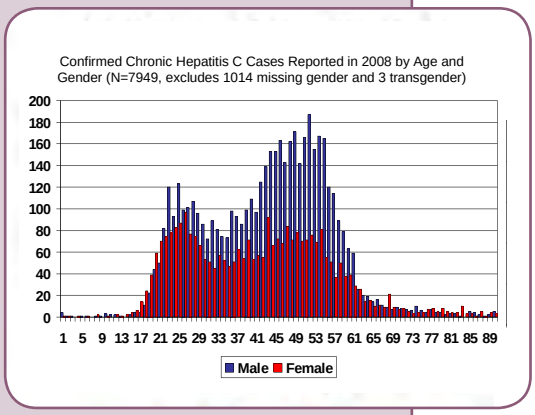


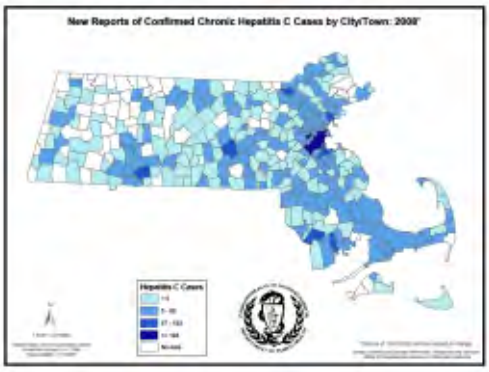
Improvements in surveillance have also allowed for better identification of acute cases of hepatitis C. Thirteen acute cases were confirmed in 2008. Identification of acute cases requires information on hepatitis A and B test results, serum liver enzyme tests and symptoms. Over 40 cases of hepatitis C reported in 2008 matched the acute case definition, but hepatitis A or B laboratory results were not available rule out other viral hepatitis causes. Acute cases of hepatitis C are reported in CDC's annual summary of notifiable diseases, while chronic hepatitis C is not.

The age distribution of hepatitis C cases reported in Massachusetts has changed between 2002 and 2008. In 2002 the reported cases were distributed in a bell shaped curve with the peak between the ages of 44 and 50 years. In 2008, the reported cases were distributed in a bi-modal curve with one peak at 25 years of age and a second at 52 years.



More cases are identified in men than in women in almost all age groups, however, the male to female ratio is closer in the 15 to 30 year age group than in the 40 to 60 year age group.



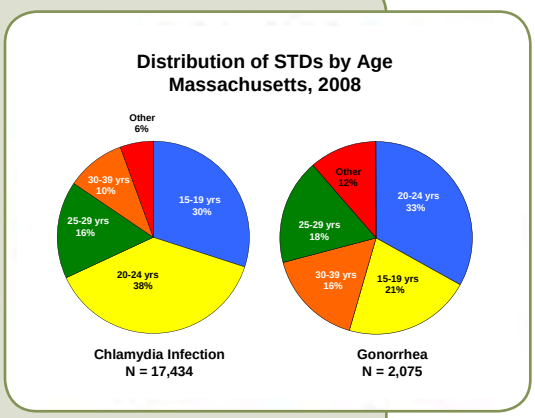


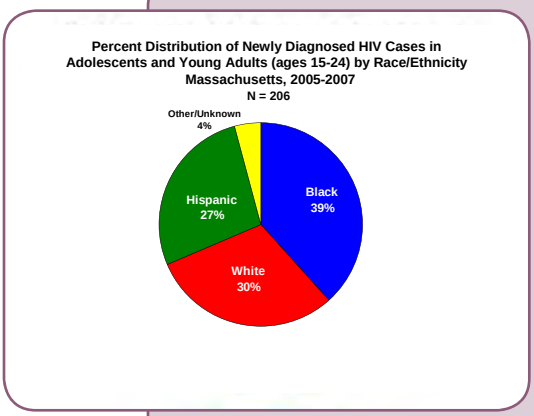
Cases of hepatitis C are reported in communities across Massachusetts, with more cases being identified in people living the urban areas of Boston, Worcester, and Springfield.

STDs IN ADOLESCENTS AND YOUNG ADULTS

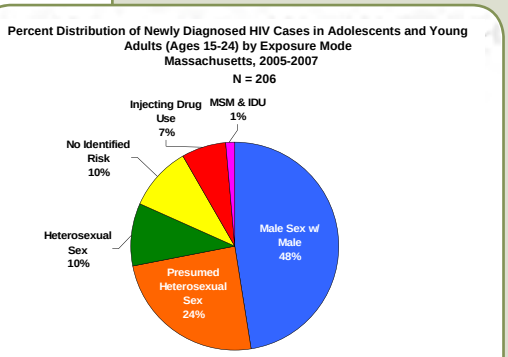
Compared to older adults, sexually active adolescents and young adults are at higher risk for acquiring STDs. This higher risk is due to a combination of behavioral, biological and cultural factors. The higher prevalence of STDs among adolescents also reflects multiple barriers to quality STD prevention services, including lack of insurance or other ability to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality. (Source: CDC. Sexually Transmitted Disease Surveillance, 2008. Atlanta, GA: U.S. Department of Health and Human Services, November 2009.)

In 2008, 68% of reported chlamydia infection cases, and 54% of reported gonorrhea cases, were in adolescents and young adults (ages 15-24).



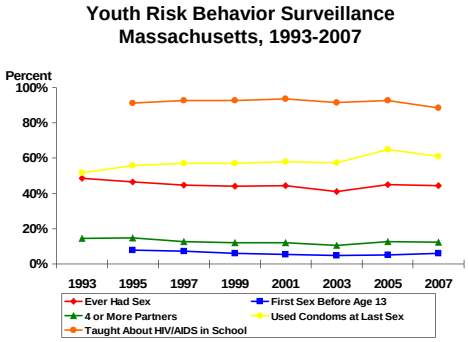


From 2005-2007, reported, newly diagnosed HIV infections among adolescents and young adults in Massachusetts had the following racial/ethnic distribution: black (39%), white (30%), Hispanic (27%), and other (4%).



From 2005-2007, in Massachusetts, the primary modes of exposure for reported, newly diagnosed HIV infection cases in adolescents and young adults were male with male sex (48%), presumed heterosexual sex (24%), heterosexual sex (10%), and injecting drug use (7%).

The Youth Risk Behavior Survey (YRBS) is performed biennially on a national sample of 9th-12th grade students. A review of data provided from the Massachusetts YRBS over the past two decades indicates that three markers of risky youth sexual behavior (ever having had sex, first sex before age 13 years, and 4 or more lifetime sexual partners) reached all-time lows in 2003 (respectively 41%, 5%, and 10%), and have subsequently shown increases of potential concern (up to 44%, 6%, and 12% in 2007). In contrast, two markers of protective sexual behaviors, use of condoms at last sex and being taught about HIV/AIDS in school, have shown declines from previous gains (respectively 61% in 2007 down from 65% in 2005, and 89% in 2007 down from 94% in 2001).



SEXUAL BEHAVIORS AMONG MASSACHUSETTS HIGH SCHOOL STUDENTS BY GENDER, 2007

	AFFIRMATIVE RESPONSES	
	MALES	FEMALES
Respondents: All students		
Lifetime sexual intercourse	45.2%	43.7%
Sexual intercourse before age 13	8.6%	3.6%
Four or more lifetime sexual partners	14.1%	10.6%
Respondents: Students having sexual intercourse in past three months		
Condom use at last sexual intercourse	63.2%	59.2%
Substance use at last sexual intercourse	27.7%	21.9%
Respondents: Students ever having sexual intercourse		
Ever been or gotten someone pregnant	8.5%	10.9%
Ever been diagnosed with HIV or STD	3.3%	3.3%

Source: Youth Risk Behavior Survey: www.doe.mass.edu/cnp/hprograms/yrbs/

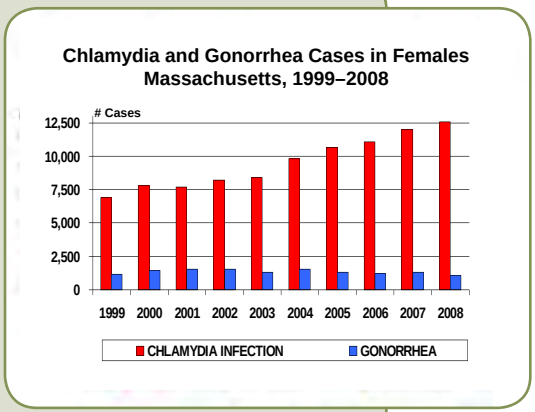
WOMEN

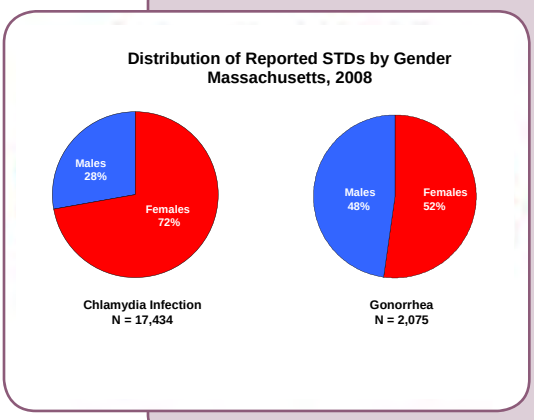
STDs AND WOMEN

Complications of STDs are greater and more frequent among women than men due to two primary factors. First, biologically, women are more likely than men to become infected if exposed to an STD. Second, STDs are more likely to remain undetected in women, resulting in delayed diagnosis and treatment, and ultimately more untreated infections leading to complications. (Source: The Hidden Epidemic, Institute of Medicine, National Academy Press, Washington, D.C., 1997.)

Untreated STDs in women can lead to serious health consequences, including pelvic inflammatorydisease, infertility, ectopic pregnancy and cervical cancer.

Unlike gonorrhea, reported chlamydia infection in Massachusetts is more common in women and has been increasing in the past ten years, in part due to increased adoption of recommended routine screening by healthcare providers.

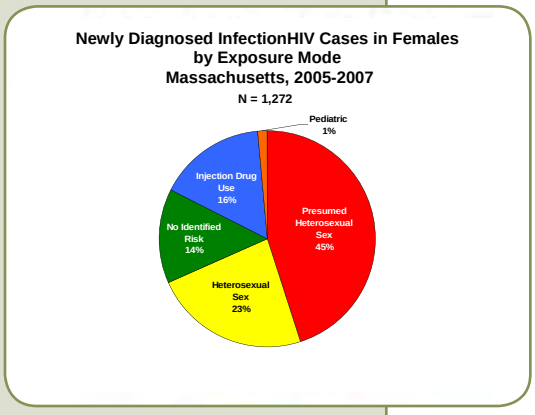


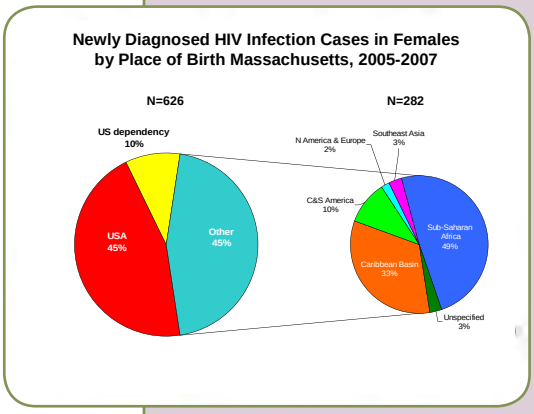


While gonorrhea cases are almost equally distributed among women and men, women are over-represented among chlamydia cases by a ratio of 2.6 to 1.

The greater number of chlamydia cases in women is attributable to more frequent screening of women as compared to men.

From 2005-2007, the exposure modes for the 1,272 newly diagnosed HIV cases reported in women in Massachusetts was attributed to presumed heterosexual sex (45%), heterosexual sex (23%), injecting drug use (18%), and pediatric exposure (1%).





From 2005-2007, 45% of women reported with diagnosed HIV infection were born outside of the U.S. For men diagnosed from 2005-2007, only 24% were born outside of the U.S.

Eighty-two percent of women diagnosed with HIV infection, who were born outside of the U.S., were born in regions of the world where heterosexual sex is the predominant mode of transmission of HIV infection.

HIGH-RISK HUMAN PAPILLOMAVIRUS PREVALENCE

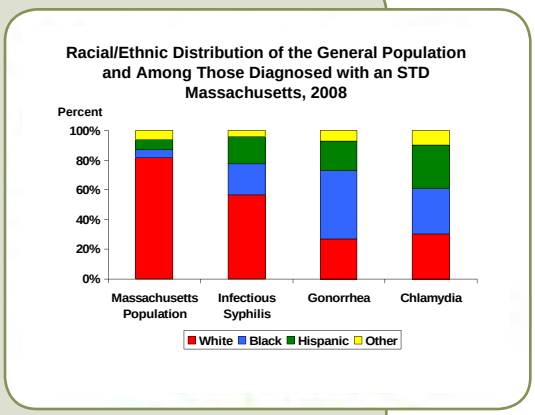
In a study of 2,048 Massachusetts women aged 18-65 years attending STD, family planning, and primary care clinics for routine cervical screening, overall age- and clinic-type adjusted prevalence of high-risk human papillomavirus (HPV)* was 19%. Prevalence was highest among women 14 –19 years of age. (Source: Datta et al., HPV infection and cervical cytology in women screened for cervical cancer in the U.S., 2003-2005. Annals of Internal Medicine, 148:493-500, 2008.)

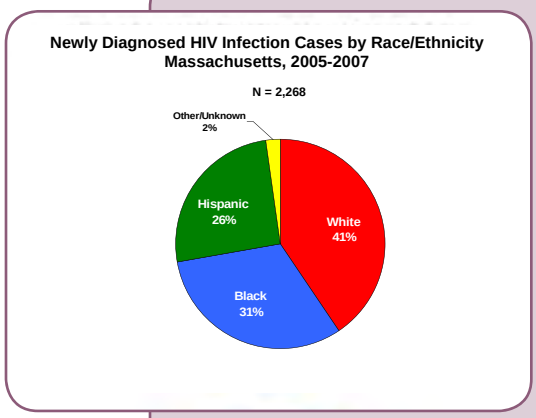
*High-risk HPV types were 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, and 68.

RACIAL/ETHNIC DISPARITIES IN STD RATES

Commuities of color have traditionally experienced higher rates of reported STDs, which likely reflects limited access to quality health care, poverty, and higher prevalence of disease in these populations. (Source: CDC. Trends in Reportable Sexually Transmitted Diseases in the United States, 2005.) Available at http://www.cdc.gov/std/stats/trends2005.htm.

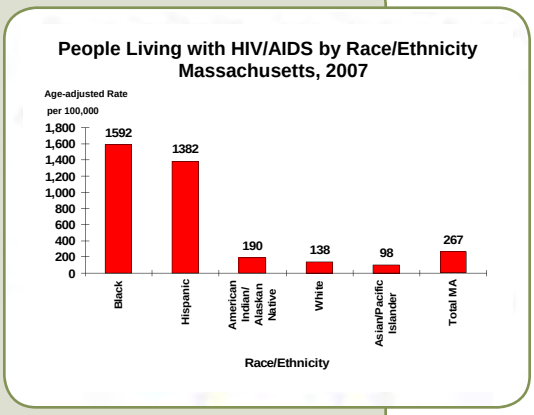
Although communities of color represent only 18% of the total Massachusetts population, these communities bear a disproportionate burden of STDs. In 2008, 43% of the reported infectious syphilis cases, 73% of the reported gonorrhea cases, and 70% of the reported chlamydia infection cases occurred in individuals from communities of color.





From 2005-2007, the racial/ethnic distribution of reported, newly diagnosed HIV infections in Massachusetts was as follows: white (41%), black (31%), Hispanic (26%), and other/unknown (2%).

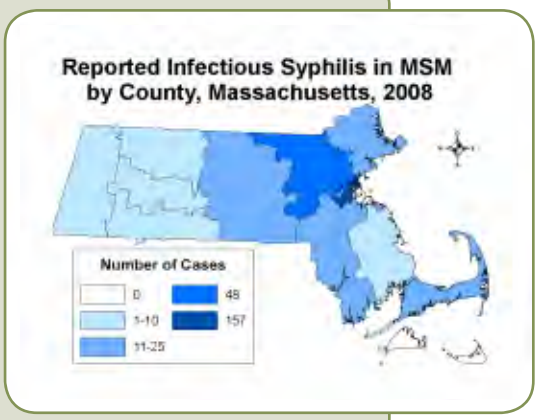
In Massachusetts, in 2007, the prevalence rate of people living with HIV/AIDS was highest among blacks and Hispanics. As compared to whites, the rate of people living with HIV/AIDS was 11.5 times higher among blacks and 10.0 times higher among Hispanics.

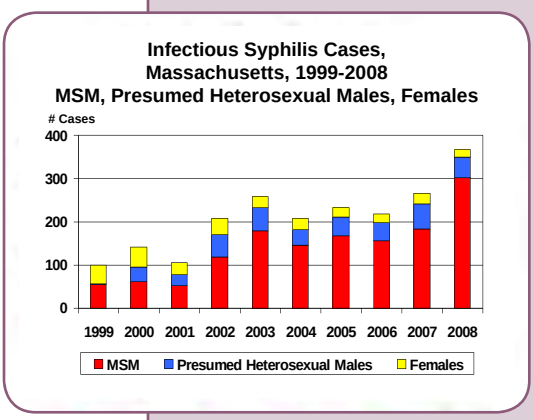


STDs IN MEN WHO HAVE SEX WITH MEN

Data from several U.S. cities suggest that an increasing number of men who have sex with men (MSM) are acquiring STDs. Because STDs and the behaviors associated with acquiring them increase the likelihood of acquiring and transmitting HIV infections, the rise in STDs among MSM may be associated with an increase in diagnoses in MSM. (Source: CDC. Sexually Transmitted Disease Surveillance, 2008. Atlanta, GA: U.S. Department of Health and Human Services, November 2009.)

In 2008, there were 302 infectious syphilis cases in men who have sex with men (MSM) reported in Massachusetts, of which, 157 (52%) were in Suffolk County.

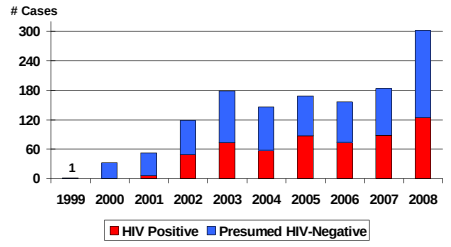




In the past seven years, men who have sex with men accounted for the majority of infectious syphilis cases in Massachusetts, ranging from 50% in 2001 to 82% in 2008.

In 2008, the racial/ethnic breakdown of reported infectious syphilis cases in MSM was white (55%), black (16%), Hispanic (18%), other (4%), and unknown (7%). The median age of the cases was 38 years, 3 years younger than that of the year before.

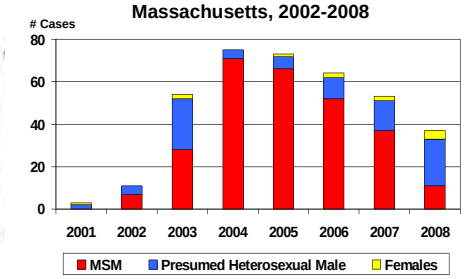
Infectious Syphilis Cases in MSM by HIV Status
Massachusetts, 1999-2008



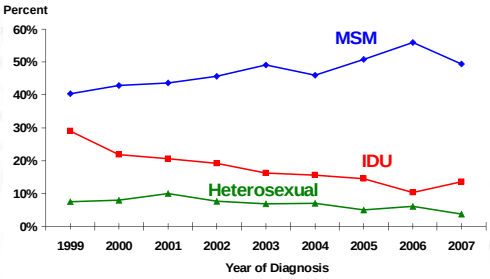
In 2008, 41% of the reported infectious syphilis cases in MSM occurred in HIV-positive individuals.

Results from the Quinolone Resistant *Neisseria Gonorrhea* (QRNG) Prevalence Project indicate a rise in quinolone-resistant gonorrhea in MSM in Massachusetts. The Project reported 7 QRNG cases in 2002 and 37 QRNG cases in 2007. In 2008, 11 QRNG cases reported among MSM.

Quinolone Resistant *Neisseria Gonorrhea*
Cases in MSM, Presumed Heterosexual Male, and Female
Massachusetts, 2002-2008



Percentage Distribution of Newly Diagnosed HIV Infection Cases in Males by Exposure Mode
Massachusetts, 1999-2007



Among males, the proportion of reported male HIV infection cases with male to male sex as the reported mode of exposure increased from 40% in 1999 to a high of 56% in 2006 then declined slightly to 49% in 2007.

Summary of Strengths and Limitations of Data

	HIV/AIDS Case Data	STD Case Data	Viral Hepatitis Case Data
Description	• Collected by MDPH Bureau of Infectious Disease Prevention, Response and Services, HIV/AIDS Surveillance Program. • Reportable statewide. • All licensed healthcare providers are required by law to report. • AIDS and HIV infection cases are reported by name, but HIV cases included in this report were reported by a code extracted from identifiers from 1999 through 2006.	• Collected by MDPH Bureau of Infectious Disease Prevention, Response and Services, Division of STD Prevention. • Reportable statewide. • All healthcare providers are required by law to report nine STDs, including syphilis, gonorrhea, chlamydia infection, and lymphoma granuloma venereum	• Collected by MDPH Bureau of Infectious Disease Prevention, Response and Services, Office of Integrated Surveillance and Informatics Services. • Reportable statewide. • All laboratories and healthcare providers are required to report laboratory indicators of hepatitis B and C infection.
Strengths	• Statewide reporting, population-based. • Risk information is available. • Completeness of reporting is high. • Comparable with other states.	• Statewide reporting, population-based. • Comparable with other states. • Enhanced reporting of positive laboratory results.	• Statewide reporting, population-based. • Enhanced reporting of acute cases, hepatitis B cases in child-bearing aged women and children and hepatitis C cases among youth ages 15-25.
Limitations	• Under-reporting (10%-15%) hampers interpretation of HIV/AIDS case data. • Not all HIV/AIDS cases are reported at time of diagnosis (reporting lag). • HIV data may be incomplete because some HIV-infected people may not have been tested or have not entered care.	• Under-reporting of up to 10% of STD cases. • Race/ethnicity is missing in 31% of gonorrhea cases and 37% of Chlamydia infection cases. • Reports are not received on those not seeking care or screening. • Bias is introduced for some STDs, such as Chlamydia infection, where screening of asymptomatic persons occurs more frequently in women than in men.	• Race data are missing in 56% of confirmed acute hepatitis B and 80% of confirmed hepatitis C cases; ethnicity data are missing in 58% of acute hepatitis B and 75% of confirmed hepatitis C cases. • Risk history data is missing in a majority of reported hepatitis B and C cases. • Reports not received on those not seeking care.

I. HIV/AIDS Exposure Mode Definitions

The HIV/AIDS exposure mode indicates the most probable risk behavior associated with HIV infection. Assignment of exposure mode is done in accordance with Centers for Disease Control and Prevention guidelines when multiple exposure modes are reported. Following is a description of the exposure mode categories:

- **MSM (Male to Male Sex)**: Includes men who report sexual contact with other men, and men who report sexual contact with both men and women.
- **IDU (Injection Drug Use)**: Cases in persons who report injection drug use.
- **MSM/IDU**: Cases in men who report both injection drug use and sexual contact with other men.
- **Heterosexual Sex**: Cases in persons who report specific heterosexual sex with a person with, or at increased risk for, HIV infection (e.g. an injection drug user). The sub-categories for this mode of transmission are listed below.
    - *Heterosexual Sex w/ an Injection Drug User*
    - *Heterosexual Sex w/ a person w/ HIV infection or AIDS*
    - *Heterosexual Sex w/Bisexual male*
    - *Other Heterosexual Sex*: Includes all other sub-categories of risk, such as heterosexual contact with a person infected through a blood transfusion.
- **Presumed Heterosexual**: Cases in persons who report heterosexual sex but do not report any other personal risk nor any knowledge of specific risk in their sex partners. Presumed Heterosexual is an exposure mode category used by the Massachusetts HIV/AIDS Surveillance Program. The Centers for Disease Control and Prevention (CDC) categorizes these cases as No Identified Risk.
- **Pediatric**: Infection before the age of 13 years, including mother to child transmission through pregnancy, childbirth or breastfeeding and blood transfusions to children.
- **NIR (No Identified Risk)**: Cases in persons with no reported history of exposure to HIV through any of the listed exposure categories. Follow-up is conducted to determine risk for those cases that are initially reported without a risk identified.

II. Race/Ethnicity of STD and HIV/AIDS Cases

Race/ethnicity references to whites and blacks represent persons who are white non-Hispanic and black non-Hispanic, respectively. All references to Hispanic for race/ethnicity represent persons of Hispanic heritage regardless of race.

III. References to Newly Diagnosed HIV Infections

Newly diagnosed HIV infections/cases include all persons diagnosed with HIV in 2007, including those who were concurrently or subsequently diagnosed with AIDS.

STD, HIV/AIDS and Viral Hepatitis Contact Information

Division of STD Prevention, HIV/AIDS Surveillance, and Ratelle STD/HIV Prevention Training Centers			
Topic	**Contact**	**E-Mail**	**Phone**
Policy Development and Administration	Brenda Cole **(Acting Division Director)**	brenda.cole@state.ma.us	617-983-6941
Sylvie Ratelle STD/HIV Prevention Training Center	Katherine Hsu **(Medical Director)**	katherine.hsu@state.ma.us	617-983-6948
	Janine Dyer **(Coordinator)**	janine.dyer@state.ma.us	617-983-6964
STD/HIV/AIDS Surveillance and Epidemiology	Jim Murphy **(Director)**	james.murphy2@dph.state.ma.us	617-983-6577
	Yuren Tang **(STD Epidemiologist)**	yuren.tang@state.ma.us	617-983-6554
	Betsey John **(HIV/AIDS Epidemiologist)**	betsey.john@state.ma.us	617-983-6570
STD Clinical Services	Katherine HSU **(Medical Director)**	katherine.hsu@state.ma.us	617-983-6950
STD Disease Intervention Field Services and STD Partner Notification	Hillary Johnson **(Director of Field Services)**	hillary.johnson@state.ma.us	617-983-6951
STD Health Education, Training, and Prevention	David Goudreau **(Syphilis Elimination Coordinator)**	david.goudreau@state.ma.us	617-983-6835
Office of HIV/AIDS			
Policy, Planning, Resource Allocation, Research, and Evaluation	Dawn Fukuda **(OHA Director)**	dawn.fukuda@state.ma.us	617-624-5310
	Deborah Isenberg **(Director of Research and Evaluation)**	deborah.isenberg@state.ma.us	617-624-5311
	Thera Meehan **(Director of Policy and Planning)**	thera.meehan@state.ma.us	617-624-5328
	Tammy Goodhue **(Director of Training and Health Communication)**	tammy.goodhue@state.ma.us	617-624-5338
Administration and Finance, Personnel, Contracts and Procurement, Budget	Bob Carr **(Deputy Bureau Director)**	bob.carr@state.ma.us	617-624-5317
	Ceci Dunn **(Director of Operations)**	ceci.dunn@state.ma.us	617-624-5370
Consumer Office	Sophie Lewis **(Director of Consumer Office)**	sophie.lewis@state.ma.us	617-624-5366
	Paul Goulet **(Consumer Office Coordinator)**	paul.b.goulet@state.ma.us	617-624-5389
Prevention and Education	Barry Callis **(Director of HIV/AIDS Prevention and Education)**	barry.callis@state.ma.us	617-624-5316
HIV Clinical Care, Home-Based HIV Care, HIV Counseling and Testing, Corrections-Based HIV Services	Brenda Cole **(Director of Health Services)**	brenda.cole@state.ma.us	617-624-5333
HIV Client Services, Case Management, Peer Support Services, Housing Support Services, Service Coordination Collaboratives	Linda Goldman **(Director of Client Services)**	linda.goldman@state.ma.us	617-624-5347
Viral Hepatitus Program			
Hepatitis Programing	Daniel Church **(Hepatitis C Coordinator)**	daniel.church@state.ma.us	617-983-6800
	Clare O'Donoghue **(Contract Manager)**	clare.o'donoghue@state.ma.us	617-983-6860
Hepatitis Surveillance and Epidemiology	Franny Elson **(Epidemiologist)**	franny.elson@state.ma.us	617-983-4382
	Shauna Onofrey **(Epidemiologist)**	shauna.onofrey@state.ma.us	617-983-6776

STD, HIV/AIDS and Viral Hepatitis Resources

Training

Professional training to community based organizations, local public health departments, and medical providers can be requested and is free of charge.

Type of Training	Contact Information and Website
STD Education, STD Partner Notification, and STD Reporting	617-983-6940 www.mass.gov/dph/cdc/std
HIV/AIDS Reporting and Surveillance Projects	617-983-6560 www.mass.gov/dph/cdc/aids
HIV/AIDS Provider Trainings	508-752-7313 www.mass.gov/Eeohhs2/docs/dph/aids/prov_training_calendar.pdf
Viral Hepatitis Education	617-983-6800 http://www.mass.gov/dph/cdc/epii/imm/imm.htm
STD/HIV Diagnosis, Treatment, and Management	617-983-9645 www.RatellePTC.org

Material and Clinical Toolkits

Health education materials and clinical toolkits can be requested free of charge.

STD, HIV, Viral Hepatitis Fact Sheets	617-983-6940 or 617-624-5338 www.mass.gov/dph/cdc/factsheets/factsheets.htm
HIV/AIDS Reporting for Health Care Providers Brochure	617-983-6560 www.mass.gov/dph/cdc/aids/hiv_report_for_health_care_providers.htm
Viral Hepatitis Posters and Brochures	617-983-6800 www.mass.gov/dph/cdc/epii/hepatitis/hepa.htm or www.mass.gov/hepc
STD/HIV Diagnosis, Treatment, and Management Toolkits	617-983-9645 www.RatellePTC.org

MDPH and MDPH Funded Websites

Division of STD Prevention	www.mass.gov/dph/cdc/std
HIV/AIDS Bureau	www.mass.gov/dph/aids
HIV/AIDS Surveillance	www.mass.gov/dph/cdc/aids
Viral Hepatitis Program	
Hepatitis C	www.mass.gov/hepc
Hepatitis A	www.mass.gov/dph/cdc/epii/hepatitis/hepa.htm
Sylvie Ratelle STD/HIV Prevention Training Center	www.RatellePTC.org
GetTestedBoston (for MSM)	www.gettestedboston.org
STD411 (for young adults/adults)	www.STD411.org

National Websites

Center for Disease Control and Prevention	www.cdc.gov
Division of STD Prevention	www.cdc.gov/std
Division of HIV/AIDS Prevention	www.cdc.gov/hiv
Division of Viral Hepatitis	www.cdc.gov/ncidod/diseases/hepatitis
National Network of STD/HIV Prevention Training Centers	www.stdhivpreventiontraining.org